REMARKS

The Examiner is thanked for the comments in the Action. They have helped us considerably in understanding the Action and in drafting this Response thereto.

It is our understanding that claims 1-27 remain pending in this application.

5   **We proceed now with reference specifically to the numbered items in the Action.**

Items 1-3 and 7:   These are informational in nature and are understood to require no reply.

Item 4 Response to Arguments:

10   We thank the Examiner for the initial remark here that the 35 USC 102 (b) rejection is withdrawn. We regret that our points on the 35 USC 103(a) rejection where not also persuasive. Before turning to the Examiner's specific remarks on that, however, we think we see now where a lot of the confusion in this prosecution has come from.

Applicant's FIG. 9 is the cover page of this published application, yet it is not particularly

15   relevant to the present claims. This figure more appropriately goes with the claims in Applicant's related application, U.S. Pat. App. no. 10/707,190 (now allowed). Nothing in FIG. 9 represents an authentication assertion, where these come from, or how they are used. In contrast, FIG. 15 shows all of this. Accordingly, we urge that comparing Applicant's FIG. 15 with the figures and the text of Andivahis will eliminate a lot of confusion.

20   **Turning now to the content of Item 4 in the Action**, the first point of disagreement is over authentication assertions. Applicant's position is that the claims recite these and the cited references (particularly Andivahis) do not teach or reasonably suggest these, that a prima facie case requires that all of the claim limitations appear in the references and therefore that no prima facie case for obviousness can be made based on the cited references. The Examiner's position

25   appears to be that Andivahis teaches something felt to be equivalent to an authentication assertion, and that does make a prima facie case for obviousness here. To get past this we need to clarify what an authentication assertion actually is, to clarify what Andivahis actually teaches, and to determine whether these are the same or at least equivalent.

The Action here states "*Andivahis teaches prior to any action authentication process*

30   *takes place between the sender and the key server, the type of authentication information is preferably included with each message sent by the sender to the Key Server.*" OK, but what is

missed here is that this information related to authentication is <u>sent by the key server</u>. As we discuss in more detail below, Applicant's authentication assertion do not typically come from or via a key server -- they are <u>used by a key server</u>. To do otherwise presents us with a which came first, the chicken or the egg problem. How does Andivahis' key server know it can trust a sender

5   to be whom they say they are, especially the first time? Applicant's key server (420)(FIG. 15) can trust the sources (414) and targets (416) because the authentication assertions (422) they provide can be verified, and an authentication assertion is trustworthy because it has been issued by an authentication authority (418)(a trusted third party). It follows that Andivahis' authentication information is at least not the same as Applicant's authentication assertion,

10   because the respective elements (assertion/information) come from different sources and are used differently.

Continuing, the Action here states:

Andivahis teaches registering a user using a personal identifying information using additional credentials, such as public key certificate, an ITU
15   *X.509 certificate or the like, the credentials can be used in the future to determine which features of the system a user may access. ... Thereafter, the Key Server can use the credential information to determine which registered user has requested a specific encryption or decryption key, and which services that user has requested. ... Therefore, Andivahis teaches authenticating a user not only with email address*
20   *but also by other credentials such as certificate (i.e. equivalent to the assertion)*

Two things are being missed here.

First, what Andivahis issues upon registration is not an authentication assertion. Semantically, the supply of random bit strings that Andivahis' key server issues are more properly termed *"receipts."* For example, if I take my laundry to ABC Cleaners, it gives me a

25   receipt; and when my wife takes that receipt back to ABC Cleaners, it gives her back my laundry [and if one of us takes that receipt to XYZ Cleaners they laugh at us]. But there is more here than semantic games. There is the definition of what an authentication assertion is in Applicant's specification. The teachings of Andivahis cannot be reconciled with this and this is why Applicant's claims distinguish over the references. For example, in paragraph [0255] the

30   specification states:

*the authentication authority **418** issues the transacting party **412** an authentication assertion **422**. ... The assertion **422** includes the identity of the transacting party **412**; the identity of the authentication authority **418**; the validity period of the authentication assertion **422**; and optional confirmation data, used*

*by the key server **420** to prove that the transacting party **412** is the rightful owner of the assertion **422**.*

Second, an authentication assertion provides benefits that Andivahis' approach (or any combination of the cited references) cannot. Andivahis has to have some mechanism to trust its

5   senders, and receipts are it. But receipts do not scale up well into real world applications. For example again, XYZ Cleaners will not accept a receipt from ABC Cleaners. Under Andivahis, if Anna is authenticated with and uses the DEF Key Server and if Bob is authenticated with and uses the UVW Key Server, they cannot exchange messages securely until one of them registers with the other's key server. In contrast, if the DEF Key Server and the UVW Key Server accept

10   authentication assertions from National Authentication Server, secure message exchange flows smoothly. It follows that Andivahis' authentication information are not equivalent to Applicant's authentication assertion. The latter provides additional advantages (ones that none of the references or their combination provide). In claim 1 this is a smooth, secure exchange in transactions that cannot be repudiated.

15   **Next in Item 4**, the Action states:

> *Applicant argued that Andivahis is not teaching the use of an authentication assertion. Applicant argued that "The cite states the sender is authenticated," but the distinction between being authenticated and doing that with an authentication assertion has apparently been missed." Andivahis teaches*
20   > *a user can register using personal identifying information and using additional credentials such as certificate (i.e. equivalent to assertion).*

Respectfully, it looks like the Examiner has confused a perceived functional equivalence with structural equivalence. First, the apparent perceived functional equivalence is not truly equivalent here. As just discussed above, Applicant's authentication assertions provide

25   functional advantages over Andivahis' authentication information. But ignoring that temporarily, substituting functional equivalence for structural equivalence is wrong. For example, Mr. Hindenburg's flying apparatus (function) comprising a balloon full of lighter than air gas (structure) did not anticipate or render obvious Mr. Wright's flying apparatus (same function) comprising pressure-differential creating wings and ailerons (different structure).

30   **Next in Item 4**, the Action states applicant argues *"Andivahis does not teach storing information from said source authentication assertion. [and] The Examiner would like to point out Andivahis teaches <u>registering</u> a user using a personal identifying information using additional credentials ... [cite]."* Yes, but this is more of what was noted above. What has been

missed again is that Andivahis is teaching a key server that is itself working with authentication information (performing <u>registration</u>), not one that is <u>using</u> an existing authentication assertion created by an authentication authority.

       Digressing briefly from Item 4 to summarize and conclude with respect to why

5   **Andivahis does not teach or reasonably suggest authentication assertions**, we again urge considering Applicant's FIG. 15 and the text of claim 1. Applicant is using a trusted third-party system. The source (414) and the key server (420) use the authentication authority (418) as a trusted third-party. Similarly, the target (416) and the key server (420) use the authentication authority (418) as a trusted third-party. Now look at any of Andivahis' figures. There is no

10   similar trusted third-party. Out of necessity, Andivahis' sender (210) and key server (240) have to trust each other, because there is no higher authority to vouch for either. Similarly, Andivahis' recipient (220) and key server (240) have to trust each other out of necessity. Of course one can argue that Andivahis' sender (210) is party one, its recipient (220) is party two, and its key server (240) is its trusted third party. But to the extent this is even functionally equivalent, it only

15   functions due to Andivahis' use of <u>registration</u> of all parties at its key server (240). As noted above and as discussed at length in the Background Art section of Applicant's specification, relying on a key server alone has numerous, major disadvantages. As regards structural non-equivalence, it should be noted that claim 1 nowhere recites registration. That is because it is simply unnecessary if a source or a target has an authentication assertion. In fact, it is a

20   substantial additional advantage of this invention that a source and/or target can be completely anonymous with respect to the key server.

       Continuing again in Item 4, the Action here states "*Favazza teaches a customer inserting an assertion, and a signature into an initial request to a web service. (page 1, paragraphs 9-10).*" However, we again urge that Favazza and Andivahis are not properly

25   combinable.

       More importantly, now that we have both Andivahis and Favazza before us, we urge considering something very fundamental that has been overlooked. Applicant's claims are all directed to systems and methods to achieve message non-repudiation, and neither Andivahis or Favazza teach how to achieve non-repudiation. [Favazza defines the term in

30   passing along with many general terms in the communications art but, in its application providing access to web services, non-repudiation is irrelevant.] This begs the question, if none

of the cited references teach non-repudiation, how can any combination of the cited references support rejection of Applicant's claims for non-repudiation systems and methods?

      And finally with respect to Item 4, the Action states that Applicant argues *"against the references individually, one cannot show nonobviousness by attacking references individually*

5   *where the rejections are based on combinations of references."* However, the Examiner appears to have misunderstood our intent. As previously noted, *"the prior art reference (or references when combined) must teach or suggest all the claim limitations."* MPEP §§ 706.02(j), 2143. Applicant's remarks about individual references have been intended to show that the present combination of references does not teach or reasonably suggest all of the claim elements.

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Items 5-6 (§ 103(a) rejections):

      These appear to be unchanged from Items 6-7 in the prior Action. Responsive here to, Applicant incorporates by reference its remarks in Item 7 of its Response dated 03/08/2007 and we respectfully ask reconsideration of those remarks in view of the further remarks above.

15   In reviewing the remarks in the last Response, we noted the following typos, and we now apologize to the Examiner for any confusion that these have caused. At pg. 5, ln. 9 the text *"here does to support"* should have been *"here does not support"* and at pg. 6, ln. 35 the text *"the Action has filed to"* should have been *"the Action has failed to."*

20   **CONCLUSION**

      Applicant has endeavored to put this case into complete condition for allowance. It is thought that the §103 rejections have been completely rebutted. Applicant therefore asks that all objections and rejections now be withdrawn and that allowance of all claims presently in the case be granted.

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Intellectual Property Law Offices   Respectfully Submitted,
1901 S. Bascom Ave., Suite 660
Campbell, CA 95008

Telephone: 408.558.9950   Raymond E. Roberts
Facsimile: 408.558.9960   Reg. No.: 38,597